AMENDMENTS TO THE CLAIMS

Claim 1 (Currently Amended) A device~~Device~~ for quantifying separable substances by measuring their inherent fluorescence when excited with UV radiation, the device comprising~~possessing the following components~~:

a) a UV source ~~(1)~~ for providing excitation light in ~~the~~ a wavelength range from 140 to 320 nm;

b) a separation medium ~~(2)~~ for providing one of a flat-bed electrophoretic separation of electrically charged substances and~~, or a separation medium (2) for~~ a flat-bed chromatographic separation of electrically charged or neutral substances;

c) regions of substances that~~, which~~ are distributed in the separation medium ~~(2), of substances which are to be~~, the substances distributed in the regions being separated and ~~which have been separated and which are also~~ unlabelled, and the substances distributed in the regions emitting ~~which substances emit, on~~, upon excitation by ~~with~~ the excitation light provided from the ~~said~~ UV source ~~(1)~~, a UV fluorescence radiation in ~~the~~ a wavelength range from 150 to 400 nm;

d) a UV detector ~~(3)~~ for detecting the UV fluorescence radiation, the UV detector being located on a same side of the separation medium as the UV source; and

e) one of optical ~~or~~ and optoelectronic components for filtering, guiding and/or amplifying the excitation light ~~radiation~~ and the UV fluorescence radiation,

wherein the excitation light provided from the UV source exhibits an energy density from 1 to 500 mW per cm^2, as measured at a surface of the separation medium.

Claim 2 (Currently Amended) The device~~Device~~ according to Claim 1, wherein~~characterized in that~~ the UV source is one of a laser, UV lamps~~or~~ and lasers for multiphoton excitation.

Claim 3 (Cancelled)

Claim 4 (Cancelled)

Claim 5 (Currently Amended) The device~~Device~~ according to Claim 1, wherein~~characterized in that~~ the separation medium is one of metal oxides, salts, papers, celluloses~~or~~ and crosslinked, gel-forming polymers.

Claim 6 (Currently Amended) The device~~Device~~ according to Claim 5, wherein~~characterized in that~~ the gel-forming polymers are one of polyacrylamides, agarose~~or~~ and dextran.

Claim 7 (Currently Amended) The device~~Device~~ according to Claim 1, wherein~~characterized in that~~ the separation medium~~(2) is a separation medium which~~ is used in flat-bed chromatography (thin layer chromatography).

Claim 8 (Currently Amended) The device~~Device~~ according to Claim 1, wherein~~characterized in that~~ the separation medium is applied to a support and~~, where appropriate,~~

provided with a UV-permeable cover.

Claim 9 (Currently Amended) The device~~Device~~ according to Claim 1, wherein~~characterized in that the component c)~~ the substances contain aromatic or heteroaromatic residues and/or optionally conjugated unsaturated carbon double bonds and/or carbon-heteroatom double bonds and/or nitrogen multiple bonds and electrically charged groups.

Claim 10 (Currently Amended) The device~~Device~~ according to Claim 9, wherein~~characterized in that~~ the substances are proteins.

Claim 11 (Cancelled)

Claim 12 (Currently Amended) The device~~Device~~ according to Claim 1, wherein~~characterized in that~~ the UV detector is one of a CCD camera, a photomultiplier, a semiconductor diode ~~or~~ and a semiconductor diode arrangement.

Claim 13 (Withdrawn) Method for determining substances which are separated by means of 1D or 2D flat-bed electrophoresis, in which method unseparated and separated substances are irradiated, in the separation medium for electrophoretic separations, with a light source and emitted fluorescence light is measured using a detector, characterized in that (a) by means of the action of UV light in the UV range, fluorescence-emitting substances (b) in the separation medium are irradiated directly with UV light of a wavelength of from 150 to 320 nm and (c) the

UV fluorescence is measured at wavelengths of from 150 to 400 nm using a UV-sensitive detector.

Claim 14 (Withdrawn) Method according to Claim 13, characterized in that the separated substances are transferred from the separation medium to a laid-on membrane by applying an electrical field perpendicular to the plane of the separation medium.

Claim 15 (Withdrawn) Method according to Claim 14, characterized in that the membrane is composed of nitrocellulose or polyvinylidene fluoride which are employed in Western blotting methods.

Claim 16 (Withdrawn) Method according to Claim 14, characterized in that the transferred substance regions are treated with unlabelled antibodies and their inherent fluorescence in the UV range is then measured after exciting with UV radiation.

Claim 17 (Currently Amended) The device~~Use of the device~~ according to Claim 1, wherein, as the substances, ~~for separating and determining~~ disease-specific substances are separated and determined from ~~in~~ samples taken from ~~the~~ one of a human body, an ~~or~~ animal body ~~or~~ and ~~from~~ plants.

Claim 18 (Withdrawn) Use of the method according to Claim 13, for separating and determining disease-specific substances in samples taken from the human or animal body or

from plants.